

## Language patterns and ATTITUDE revisited

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# Language patterns and ATTITUDE revisited: Adjective patterns, Attitude and Appraisal

**Abstract:** This paper investigates the association between language patterns and attitudinal meanings, focusing specifically on adjective complementation patterns and types of attitudes as proposed in the Appraisal model (Martin & White 2005). The investigation shows that the tripartite division of Attitude into Affect, Judgement and Appreciation can be supported with pattern differentials. The detailed scrutiny of adjective patterns with respect to the ATTITUDE system supports Bednarek's (2009) argument that both aspects of attitudinal lexis (emotion or opinion lexis) and attitudinal target (the entity being evaluated) should be considered in analysing appraisal expressions, which leads to the proposal that Appraisal is in essence instantiated by choices made simultaneously in terms of the attitudinal lexis that is used and the attitudinal target that is involved.

**Keywords:** adjective patterns, Attitude, Appraisal, corpus linguistics, systemic functional linguistics

## 1. Introduction

Evaluative language has been studied from many different perspectives. The attention that it has received is evident in the wide range of terms under which it has been discussed; for example, 'affect' (e.g. Ochs 1989; Ochs & Schieffelin 1989), 'modality' (e.g. Halliday 1994), 'evaluation' (e.g. Hunston & Thompson 2000; Bednarek 2006; AUTHOR 2011; Thompson & Alba-Juez 2014), 'appraisal' (e.g. Martin 2000; Martin & White 2005), 'stance' and 'stance-taking' (e.g. Conrad & Biber 2000; Englebretson 2007), and 'sentiment' (e.g. Turney 2002; Pang & Lee 2008). However, as Thompson (2014: 48) notes, "it is within Systemic Functional Linguistics that the investigation of the systems of evaluative choices available to language users and other function in discourse has been carried farthest". Here Thompson refers to the Appraisal model, proposed and developed by Martin, White, and others (Eggins & Slade 1997; Martin 2000, 2003; White 2000, 2003, 2011; Macken-Horarik & Martin 2003; Martin & Rose 2003; Martin & White 2005; Coffin 2006; Hood 2010). The Appraisal model is widely recognised as the most systematic and influential framework currently available for theorising evaluation (Moreno-Ortiz & Pérez-Hernández 2014: 93; Millar & Hunston 2015), while remaining open to critique

(see, for example, Bednarek (2006: 32–35) and Thompson (2014) for critical evaluations of the Appraisal framework).

The Appraisal systems are based on meaning contrasts rather than on contrasts in morpho-syntactic form, and although individual items such as adjectives are quoted for illustrative purposes (e.g. Martin and White 2005: 53), it is made clear that labelling a stretch of discourse as instantiating a point in the network is not simply a matter of identifying a relevant word. Rather, an analysis refers to as much of the context and meaning of the discourse as is necessary. In contrast, the starting point for the study reported in this paper is lexico-grammatical form, and in particular the patterning of language associated with adjectives. Specifically, the paper uses adjective complementation patterns as a heuristic to explore the Appraisal model, focusing on the ATTITUDE<sup>1</sup> system. This paper presents a corpus-based study, in which instances of adjective use are analysed within their immediate co-text, but independently of their broader context. It therefore observes Appraisal, or more specifically Attitude, through a rather different lens from that of either Martin and White (2005) or Bednarek (2006). The essential questions it asks are the following:

- To what extent can formal criteria, specifically adjective complementation patterns, be used to distinguish between Affect, Appreciation and Judgement as the three components of Attitude?
- To what extent do networks derived from close scrutiny of a set of forms resemble those derived from a broader focus on meaning?

As Martin & White (2005: 46) themselves acknowledge, the proposal of dividing Attitude into Affect, Judgement and Appreciation should “be treated at this stage as hypotheses about the organisation of the relevant meanings”. Bednarek (2009) has taken up the challenge implied by this and has investigated whether, as Martin and White (2005: 58–59) have suggested, linguistic

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<sup>1</sup> In line with Systemic Functional Linguistics (SFL), capital letters are used to indicate linguistic systems.

patterns can be used as a ‘diagnostic’ to distinguish the three types of Attitude from each other. The main observations Bednarek (2009) makes can be summarised as follows:

- 1) While linguistic patterns support the basic distinction made between emotion (Affect) and opinion (Judgement/Appreciation), pattern differentials may not be a useful diagnostic to differentiate Judgement from Appreciation;
- 2) consequently, although it might be possible to use algorithms based on a pattern-based approach to differentiate Affect from opinion, it would not be possible to distinguish automatically items of Judgement from those of Appreciation;
- 3) when classifying an instance of appraisal, two aspects of the evaluative act need to be taken into account, i.e. the kind of attitudinal lexis used, and the kind of attitudinal targets or types of attitudinal assessment involved.

These observations will be revisited later. Bednarek (2009) has contributed substantially to the exploration of the association between language patterns and attitudinal meanings, and her observations deserve to be compared with further empirical investigation. The present study is both broader and narrower than Bednarek’s. It focuses on adjectives alone, since adjectives are the word class that most typically realises evaluation (Martin & White 2005: 58; AUTHOR 2011). It is based on Francis *et al.* (1998), which is a comprehensive corpus study of the complementation patterns of over five thousand adjectives and which provides the most comprehensive set of adjective patterns and the adjectives used in them that is currently available. The paper presents an appraisal-informed analysis of the adjective patterns identified in Francis *et al.* (1998), and further uses that analysis as a heuristic to examine the Appraisal framework.

First, though, it is important to establish the relevance of a pattern-grammar-based investigation of evaluative language to the Appraisal taxonomy of attitudinal meanings. Appraisal and Pattern Grammar are situated within different realms of linguistic enquiry: the former is rooted in Systemic Functional Linguistics (Halliday 1994) and the latter in Corpus

Linguistics (Sinclair 1991, 2004). SFL links meaning to lexico-grammatical choices in the system networks while corpus studies prioritise the meanings inherent in phraseology. As noted above, the Appraisal networks in particular systematise meanings rather than form; the result is a model that, while rooted in the analysis of text, is analyst-driven and of a high level of abstraction. Pattern grammar, while focusing on the observation of form in word-in-pattern exemplars, stresses the association of morpho-syntactic form and meaning. In particular, the complementation patterns that occur with adjectives are strongly associated with the expression of evaluative meanings. For example, AUTHOR (2011) argues that “the original concept of grammar patterns was not particularly connected with evaluation, but the association of pattern and meaning inevitably raises questions as to whether patterns can assist in identifying and characterising evaluative language”. In a similar vein, Thompson (2014: 48) points out that “[r]esearch into pattern grammar in the Cobuild project ... has ... thrown up particular semantic groups which fit into patterns associated with evaluation”. This complementarity of approaches raises the question of how similar or different the taxonomies of meaning are that are derived from each approach. A complete coincidence of taxonomy would suggest corroboration, while significant divergence would imply that each taxonomy should be treated as only one possibility among several different ones.

In this study, lexis is taken as the starting point for the investigation of evaluative meanings. Although evaluation is cumulative and context-dependent, in its most canonical, or inscribed, form it is signalled by specific lexical items (Hoey 1983), especially adjectives (AUTHOR 2011). Meaning is more reliably associated, however, with phrases than with individual words. For example, *guilty* has legal associations when it occurs in the pattern **ADJ of**: someone is *guilty of a crime*, whereas *guilty* in **ADJ about** is associated with the construal of emotion: someone *feels guilty about something they have done*. In terms of Appraisal, *guilty* in **ADJ of** realises Judgement whereas *guilty* in **ADJ about** realises Affect, which suggests that the exact type of Attitude an item realises may be dependent on the pattern with which it co-occurs. The point, then, is that an individual item only has a meaning potential and that this potential is

actualised when it occurs in specific patterns. This is the reason why we focus on adjective-in-pattern exemplars in the present study.

Summing up, our analysis is informed by Appraisal theory, but it does not take everything for granted that is postulated in that framework. We analyse attested instances of adjective patterns, aiming to explore thoroughly the association between adjective patterns and attitudinal meanings, and to further explore where a pattern-based, appraisal-informed approach may lead us with regard to the modelling of evaluative language. We hope to use the findings of this investigation as a heuristic to either corroborate or challenge the Appraisal taxonomy of attitudinal meanings.

The remainder of this paper is organised into 6 further sections. Sections 2 and 3 offer a brief outline of the ATTITUDE system and adjective complementation patterns respectively, providing the theoretical and practical background to the subsequent investigation. Section 4 presents a qualitative analysis of adjective patterns in terms of Attitude, which will be supplemented with quantitative information. Section 5 addresses the question as to how far the Appraisal classification of Attitude can be supported with adjective patterns. Section 6 discusses what additional insights into Appraisal this analysis of adjective patterns can offer. Section 7 concludes the paper, summarising the main observations and motivating the necessity of further investigation into the association between language patterns and attitudinal meanings.

## **2. ATTITUDE in the Appraisal model**

APPRAISAL comprises three semantic systems, namely ATTITUDE, which deals with the construal of emotion and opinion, GRADUATION, which is concerned with how attitude is upgraded or downgraded, and ENGAGEMENT, which is related to intersubjectivity (see Martin & White (2005) for a detailed discussion of the three systems). This paper focuses on the ATTITUDE system.

ATTITUDE covers three distinct but related semantic domains, i.e. Affect – how one feels, or more specifically how one “deals with resources for construing emotional reactions” (Martin

& White 2005: 35), Judgement – the ethical evaluation of a person’s behaviour and character, and Appreciation – the aesthetic evaluation of products and processes (Martin 2000; Martin & White 2005: 35). Illustrative examples<sup>2</sup> of Affect, taken from the British National Corpus (henceforward BNC) are given below.

- (1) The old Frenchman was *delighted with* the Tabaco and soap.
- (2) He was *dissatisfied with* purely materialistic explanations for life’s mysteries.
- (3) I get very *bored with* reading how difficult he is.

Judgement “is concerned with resources for assessing behaviour according to various normative principles” (Martin & White 2005: 35), as in the following examples.

- (4) She was really *good at* baking.
- (5) He was very *brave about* the whole thing.
- (6) ... he was undoubtedly *modest about* his qualifications and achievements.

Appreciation deals with “resources for construing the value of things, including natural phenomena and semiosis (as either product or process)” (Martin & White 2005: 36). Some illustrations are given below.

- (7) ... these things are not *good for* our life support system or for our quality of life.
- (8) The twentieth century has become *notorious for* its rejection of rationality.
- (9) This was a city *famed for* its hospitality to servicemen.

Each sub-system of ATTITUDE has more delicate categories. AFFECT is further divided into Un/happiness, Dis/satisfaction and In/security; JUDGEMENT is concerned with two major categories, i.e. judgements of social esteem, comprising Normality, Capacity and Tenacity, and judgements of social sanction, comprising Veracity and Propriety; APPRECIATION has three sub-categories, i.e. Reaction, Composition and Valuation. Since the present study does not take into account these more delicate categories, we will not describe them here in any further detail (but see Martin & White (2005: 45–58) for a thorough discussion).

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<sup>2</sup> Examples used in this study unless otherwise noted are either taken from Francis *et al.* (1998) or from the British National Corpus (BNC).

The Attitude sub-systems are sometimes presented as dealing with discrete subject matters. Instances of Affect are about people and how they feel; instances of Judgement are about people and how they behave; and instances of Appreciation are about things and their value. Martin and White (2005: 59–61), however, point to the topographical similarities between these categories. Praising an innings in a game of cricket, for example, may simultaneously appreciate the innings as an entity and judge the skill of the players. AUTHOR (2011: 138–140) conceptualises the sub-systems as alternative ways of performing the same (evaluative) action. A student’s essay, for example, may be praised either by means of expressing Affect towards it (*I loved this essay*), or by Judging the writer (*You demonstrate real critical acumen in this essay*), or by expressing Appreciation of the essay as an entity independent of its writer (*This essay makes a coherent argument*). This interpretation highlights the commonality of Attitude rather than the distinctions within it, and makes the point that each of Affect, Judgement and Appreciation may be used to perform an evaluation of, or, to use Dubois’ (2007) term, to take a stance towards an entity. A consequence of this view is that instances of Affect with ‘I’ as subject are viewed as very different from those with a third person as subject. This might be illustrated with the three examples shown above and repeated here for convenience:

- (10) The old Frenchman was ***delighted with*** the Tabaco and soap.
- (11) He was ***dissatisfied with*** purely materialistic explanations for life’s mysteries.
- (12) I get very ***bored with*** reading how difficult he is.

Example 12 performs an evaluation of ‘how difficult he is’. In examples 10 and 11, evaluations of tobacco and soap, or materialistic explanations, are reported but not performed. The evaluation is attributed to ‘the old Frenchman’ and ‘He’ respectively. We will return to this point below.

As noted above, the categories of Affect, Judgement and Appreciation are meaning-based rather than form-based. The classification of each individual instance is carried out with full awareness of the whole text in which it occurs, and in recognition of the meaning of the instance within that text. Although the classification is evidence-based, it is also an act of interpretation



on the part of the researcher. Martin (2000) comments that in proposing the most appropriate label for individual examples he offers a ‘reading’ rather than an ‘analysis’ of the text. In spite of this resistance to formal criteria for identification, Martin and White (2005: 58–59) have suggested that it may be possible to identify grammatical frames by which each type of Attitude is canonically realised.

According to Martin and White (2005), the grammatical frames (or patterns) that are canonically used to express Affect are *person feels **affect** about something* and *it makes person feel **affect** that*; the grammatical frames for Judgement are *it was **judgement** for person/of person to do that* and *(for person) to do that was **judgement***; while the grammatical frames for Appreciation are *person consider something **appreciation*** and *person see something as **appreciation*** (Martin & White 2005: 58–59, italics and bold face original). The question as to whether these grammatical frames are useful for distinguishing types of attitudinal meanings has recently been addressed by Bednarek (2009), who draws the following conclusion:

In terms of the diagnostic potential of the more specific patterns proposed by Martin & White (2005), it must be said that such patterns only partly work to identify specific types of ATTITUDE lexis, with the AFFECT pattern seeming most promising. More specific patterns are associated with specific evaluative functions. However, because of their delicacy, these may be relatively useless for the development of automated parsing software.

Bednarek (2009: 179)

Here, Bednarek sets the bar quite high in requiring that a diagnostic be sufficient to create a computer algorithm, rather than, say, to inform the decision of an analyst. Her work raises two issues, in common perhaps with all use of diagnostics associated with canonical patterns or frames (see also Silk (fc.), who attempts to establish frames for identifying adjectives of subjective taste). One is that as the canonical form appears relatively rarely, paraphrase is needed to argue for a particular frame being relevant in each case, and paraphrase inevitably alters meaning. The second is that frames (patterns, constructions) have a meaning of their own (Goldberg 1995, 2006; Hunston & Francis 2000) that imposes meaning on their constituent words, thereby compromising their diagnostic potential. This indicates the necessity to further

explore adjective patterns in more detail, and to focus on instances of their actual use. As well as investigating further the issue of pattern or frame as a diagnostic, it will be possible to indicate what further insight a comprehensive study of adjective complementation patterns will offer for the Appraisal framework. In this paper, therefore, we present a more thorough appraisal analysis of all adjective complementation patterns identified in Francis *et al.* (1998), investigating whether the more general adjective patterns can be used as a diagnostic to distinguish types of Attitude.

### 3. Adjective patterns

Although the pattern grammar project was originally not envisaged as primarily related to evaluation, the observation that there are some patterns whose main function is to evaluate suggests that grammar patterns may be useful for the investigation of evaluative language (Hunston & Sinclair 2000; AUTHOR 2003, 2011). According to AUTHOR (2011), “[t]he importance of pattern to evaluative meaning is illustrated most clearly in the case of adjectives”, because adjectives are regarded as the typical realisations of attitudinal meanings, as noted above. This in turn justifies our use of adjective patterns (Francis *et al.* 1998) as the starting point for the current investigation. Further, complementation patterns in which the adjective is governs a following clause or prepositional phrase (e.g. **ADJ** *about*, **ADJ** *that*; see below for a more detailed exemplification), rather than the much more frequent **ADJ n** (e.g. ‘pretty child’) or **v-link ADJ** (e.g. ‘The food was horrible’), are selected for two reasons. Firstly, the **ADJ n** and **v-link ADJ** patterns are diagnostics for the whole of the word class ‘adjective’, so they are unlikely to distinguish evaluative meaning (instances of **ADJ n** include both ‘a clever man’ and ‘a tall man’), whereas it has been observed that those adjectives that regularly occur with a complementation pattern are predominantly evaluative (Hunston & Sinclair 2000). Secondly, the complementation patterns incorporate in a single structure a number of semantic roles associated with evaluation, as shall be discussed below.

All the 51 adjective complementation patterns identified in Francis *et al.* (1998) have been examined for this study. For convenience, these patterns are grouped into five formal sets, each of which is discussed briefly below.

The first set comprises those patterns in which adjectives are followed by a clause, including *that*, *wh-*, *to-inf* and *-ing*, as illustrated below.

- (13) He was **annoyed** *that* no meal was available.
- (14) I was **worried** *what* my husband might think.
- (15) The printing is bold and **easy** *to* read.
- (16) You're so **lucky** *having* all this money.

The second set bundles patterns with adjectives that are followed by a prepositional phrase.

- (17) I'm **glad** *about* that.
- (18) He's proved absolutely **ideal** *as* the captain.
- (19) I'm not **scared** *of* dying.

Thirdly, there are adjective patterns which begin with an introductory *it*; for example,

- (20) It is **horrible** *when* your friends seem to be letting you down.
- (21) It is **exciting** *to* see the house taking shape.
- (22) It's **normal** *for children to* complain for unusual aches and pains.

Lastly, there are two other types of adjective patterns that occur in clauses that begin with *there* or *what* respectively.

- (23) **There's nothing good** *about* being poor.
- (24) **What is vital** *is that* you understand the depth of my feelings.

Sections 2 and 3 have presented an outline of the ATTITUDE system and have introduced the types of adjective patterns that will be examined in this study. In the following sections, these patterns will be analysed in terms of Attitude, aiming to explore thoroughly the association between adjective patterns and attitudinal meanings.

#### **4. Analysing adjective patterns in terms of Attitude**

The first step in the analysis is to identify each pattern and to establish whether there are instances of use of that pattern that could be placed in each of the Attitude types. For example, the first pattern (**ADJ *that***) in Table 1 is found to occur with the adjective *lucky*, and to instantiate Judgement when it does so. On the other hand, when the pattern occurs with an adjective such as *annoyed*, Affect is instantiated. No examples were found of the **ADJ *that*** pattern instantiating Appreciation. The analyses of adjective patterns are presented here in the same order as they were introduced in Section 3: first, adjectives followed by a clause, then adjectives complemented by prepositional phrase, then adjective patterns with an introductory *it*, and lastly, adjective patterns with *there* and *what* respectively.

The first set includes those patterns where an adjective is complemented with a clause. There are four patterns in this category, i.e. **ADJ *that***, **ADJ *wh***, **ADJ *to-inf***, and **ADJ *-ing***. Table 1 shows the patterns and gives examples; in each case the example and its highlighted adjective-in-pattern exemplar is associated with one of the Attitude categories.

#### **TABEL 1 ABOUT HERE**

The second set groups together patterns in which an adjective is complemented with a prepositional phrase. These patterns were simply examined as one single ‘pattern’ in Bednarek (2009); however, the present study suggests that these patterns merit a more detailed examination. This set comprises 16 patterns, shown in Table 2.

#### **TABEL 2 ABOUT HERE**

The third set comprises those patterns that have an introductory *it*. There are 20 patterns in this set, the analyses of which are shown in Table 3.

#### **TABEL 3 ABOUT HERE**

It may be worth noting that Bednarek (2009: 169) analyses *unnecessary* and *irritating* occurring in the pattern ***it* v-link ADJ *of* n to-inf**. (e.g. *It was unnecessary of him to say it; it was*

*irritating of them to whine*) in terms of Appreciation and (Covert) Affect respectively; however, examples like these are labelled as Judgement in Table 3. This is because our starting-point is the pattern as a whole, rather than the adjective in isolation. The action construed by the *to*-infinitive clause represents human behaviour, and in our view it is the action that is evaluated by the adjective. Thus, although *unnecessary* and *irritating* in isolation do not necessarily perform Judgement, they do so when they occur in the diagnostic pattern of Judgement ***it v-link ADJ of n to-inf.*** (see also AUTHOR 2011).

The fourth set includes those patterns that begin with *there*, as shown in Table 4.

#### **TABEL 4 ABOUT HERE**

The final set to be examined consists of those patterns that begin with *what* and that are traditionally known as pseudo-cleft or *wh*-cleft constructions. These are shown in Table 5.

#### **TABEL 5 ABOUT HERE**

A question which arises from this qualitative analysis of adjective patterns is the extent to which quantitative information would enrich the results. If, for example, a given pattern were to occur 98 times in instantiating Affect and only 2 times in instantiating Judgement, then although it could be said to be found with each category of Attitude, it would be much more strongly associated with Affect than with Judgement.

To assess the quantitative distribution of the patterns under investigation, we compiled a corpus, drawing on those texts which are categorised as Biography<sup>3</sup> in the BNC (see Lee (2001) for a detailed discussion of the classification of texts in the BNC). Biographical discourse is selected because biography is not only concerned with the description of the subject's life experiences, but also with his/her achievements, characters, and behaviours. We could therefore be reasonably confident that this type of discourse would provide many examples of evaluation

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<sup>3</sup> Note that for the quantitative analysis here it is not a requirement that the corpus be representative of the genre(s) of biography, only that it comprise texts in which instances of evaluation are plentiful.

(AUTHOR 2015). The corpus (named the Corpus of Biography) consists of 100 texts and approximately 3.5 million tokens. Search queries of adjective patterns were performed using the BNCweb CQP-edition (Hoffman *et al* 2008). These searches identified sequences of words (for example, the search of ‘\_AJ\* in’ identified sequences containing words with the Adjective tag followed by *in*); additional manual work was needed to distinguish between those instances that exemplify a complementation pattern (e.g. *interested in art*) and those that do not (e.g. *famous in parts of Wales*).

This procedure facilitated a quantitative analysis of selected adjective patterns: adjectives followed by the prepositions *at*, *about*, *by*, *for*, *in*, *of*, *to*, *towards* and *with*; and adjectives followed by the clause types ‘to-infinitive’ and ‘that-clause’. The number of types of adjective (that is, the number of different adjectives, not the total occurrences of each adjective, or tokens) in each pattern and each category was established, and the percentage of types in each pattern accounted for by each pattern was calculated. The results are shown in Table 6 (percentages have been rounded).

#### **TABEL 6 ABOUT HERE**

In one case, **ADJ about**, the proportions are approximately equal, but in the other patterns there is one predominant category. For example, 75% of the adjective types in the **ADJ at** pattern realise Affect and 61% of the **ADJ to** adjectives realise Appreciation. In some cases the strength of alignment between pattern and Attitude type is even stronger. All but 3 adjectives in **ADJ by** realise Affect, only 1 adjective in **ADJ towards** does not realise Judgment, and only 3 adjectives in **ADJ that** do not realise Affect. Calculating types only does not provide the full story, of course, as some categories of Appraisal seem to show more variation than others. For example, although only 25% of the adjective types in **ADJ at** relate to Judgement (these are *good*, *adept*, *excellent* etc.), the phrase *good at* (53 occurrences) occurs almost three times as frequently as the next most frequent phrase *surprised at* (18 occurrences), suggesting that token counts might yield somewhat different results (AUTHOR 2015). It is unlikely, however, that the most

striking results from Table 6 would be substantially altered. In consequence, although it would not be reasonable to claim that a given pattern is uniquely indicative of one particular type of Attitude, it is true that a pattern may be predominantly associated with one particular type of Attitude (e.g. **ADJ by** is predominantly associated with Affect).

## **5. Adjective patterns and ATTITUDE**

### **5.1 Form and Meaning**

In this study, distinctions of form are considered to be important because they reflect distinctions in meaning. That is, if proposed semantic categories are supported by differences in form, they might be considered more reliable than those for which no such formal distinctions exist. The corollary of this is that semantic distinctions might usefully be investigated through attention to form. This is consistent with Wittgenstein's (1921) proposal that 'language mirrors reality' (cited in Alba-Juez & Thompson 2014: 3) and, more notably, with Austin's argument that "our common stock of words embodies all the distinctions men have found worth drawing" (Austin 1957: 8). Arguably, Austin does not mean that the words themselves embody the distinctions; rather, he suggests that the distinctions worth drawing can be generalised by analysing the lexicon. A quantitative dimension to this argument has been added by researchers in personality psychology, in particular by Saucier and Goldberg who argue that "[t]he *degree of representation of an attribute in language has some correspondence with the general importance of the attribute*" (Saucier & Goldberg 2001: 849, italics original). In other words, the more frequent an attribute is represented in language, the more important that attribute is. What we have done is to replace the concept of 'stock of words' with that of 'stock of patterns'. Because word-meaning is mutable, but word-in-pattern meaning is less so, it is argued here that patterns can be used to test the semantic distinctions drawn in the ATTITUDE system.

In the following subsections we seek answers to the following questions:

- 1). Are there any adjective patterns that can be used to distinguish emotion lexis from opinion lexis, i.e. to distinguish Affect lexis from Judgement and Appreciation ones?
- 2). Are there any adjective patterns that can be used to distinguish Judgement lexis from Appreciation ones?
- 3). Are there any adjective patterns that only co-occur with one specific type of Attitude?

## 5.2 Lexis of emotion vs. lexis of opinion

As noted at the beginning, our analysis focuses on adjective-in-pattern exemplars whose meanings appear to be stable; this allows us to talk about different types of evaluative lexis (e.g. Judgement lexis, Appreciation lexis). Based on tables 1–5, we summarise those patterns that are found to co-occur with either emotion or opinion lexis, but not with both (see Table 7).

### TABLE 7 ABOUT HERE

Table 7 demonstrates that there are 17 patterns that are used with only emotion (Affect) or only opinion (Judgement/Appreciation) lexis. This is consistent with Bednarek's (2009) investigation and supports it by identifying more such patterns. Most of the patterns in Table 7 belong to the 'it', 'there' or 'what' types; thus it is clear that most adjective complementation patterns outside this set fail to distinguish between emotion and opinion.

## 5.3 Judgement vs. Appreciation

The next issue to be addressed is whether pattern differentials also support the distinction drawn between the ethical and aesthetic evaluation, or more straightforwardly, whether patterns can be used to distinguish the lexis of Judgement from that of Appreciation. As noted earlier, Judgement is mainly concerned with the ethical evaluation of human character and behaviour, and Appreciation with the aesthetic evaluation of processes, performances, and natural phenomena. The boundary between the two categories, however, often tends to be blurred, as noted above; that is, the lexis of judgement can be used to appreciate things and the lexis of



appreciation can be used to judge human actions/behaviour (see also Martin and White 2005: 60–61; Bednarek 2009: 180). Thompson has recently discussed this in terms of a Target-Value mismatch (Thompson 2014: 56–59). But does this mean that the distinction between Judgement and Appreciation cannot stand?

In order to seek answers to this question, we summarise in Table 8 those patterns that co-occur with only one type of opinion lexis (though some of these patterns may also co-occur with emotion lexis).

#### **TABLE 8 ABOUT HERE**

As is shown in Table 8, a number of adjective patterns are found to only co-occur with one type of opinion lexis, i.e. either Judgement or Appreciation, which suggests that Judgement and Appreciation do not necessarily share all patterns, and correspondingly, that formal distinctions support the semantic distinction to some extent (cf. Bednarek 2009). This has further implications, as will be discussed in Section 6 below. Nevertheless, the fact that many of the patterns also co-occur with the lexis of Affect appears to support Bednarek’s (2009: 173) argument that “an automatic distinction (using parsing software) between the ATTITUDE sub-categories APPRECIATION and JUDGEMENT with the help of these very general patterns is not easily possible”. This leads to the final question we want to address in this section: are there any adjective complementation patterns that only co-occur with one type of attitudinal lexis?

#### **5.4 Patterns that only co-occur with one type of attitudinal lexis**

To address this question, adjective patterns which co-occur with one type of attitudinal lexis only are summarised in Table 9.

#### **TABLE 9 ABOUT HERE**

Nine adjective complementation patterns are found to only co-occur with one type of Attitude. This extends Bednarek’s (2009) investigation a little further. That is, while Bednarek’s (2009)

examination of some selected adjective patterns suggests that it would not be feasible to distinguish automatically types of attitudinal lexis using the pattern-based approach, she does not rule out the possibility that some other patterns may be of some use to do so. As can be seen in Table 9, our analysis shows that some adjective patterns do indeed differentiate between different types of Attitude. The concern, however, is that only very few such patterns are found and some of these patterns occur quite infrequently, which limits their usefulness as a diagnostic for the automated recognition of different types of attitude. For example, only three items (*angry, conscious, unhappy*) occurring in four instances in the BNC instantiate the pattern **it v n ADJ that**, and only five items (*odd, peculiar, extraordinary, strange, ironic*) occurring in eight instances instantiate the pattern **it v n as ADJ that**<sup>4</sup>.

Summing up, it can be argued that adjective complementation patterns offer some support for the distinction between emotion and opinion, and some for the distinction between types of opinion, though the three-way classification of Attitude into Affect, Judgement and Appreciation is less convincingly supported, based on the fact that very few patterns are associated with only one of these categories. As tables 1 to 5 show, most adjective patterns are associated either with all categories or with Affect and either Judgement or Appreciation. The fact that a few patterns do align with the distinctions, however, offers some corroboration for the tripartite distinction (see Table 9).

## 6. Adjective patterns, Attitude and Appraisal

It was said at the beginning of this paper that adjective complementation patterns would be used as a heuristic for exploring Attitude systems. This means that in addition to answering specific research questions, the activity of looking at many instances of Appraisal, organised around particular adjectives and complementation patterns provides insights that might not be available when whole texts are the object of study. As has often been proposed (e.g. Baker 2006;

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<sup>4</sup> The query scripts for the two patterns are tentatively composed as "it \* \_VV\* (\_NN\* | \_NP0 | \_PN\*) \_AJ\* \_CJT" and "it \* \_VV\* (\_NN\* | \_NP0 | \_PN\*) as \_AJ\* \_CJT". More details about CQP query in BNC are available at <http://ucrel.lancs.ac.uk/bnc2/bnc2guide.htm#tagset>.

Partington, Duguid & Taylor 2013), discourse and corpus studies complement each other. In the case of this study, however, what is at stake is not how a given set of texts should be interpreted but how a model of analysis should be constructed. Three arguments will be made in this section. The first will corroborate the view that there is considerable overlap in the lexis used to instantiate Judgement and Appreciation, with the distinction between them depending on the target of the evaluation rather than its form. The second is that the parallels between many instances of Affect and those of Opinion (Judgement / Appreciation) in terms of the patterns that are used draw attention to both in effecting an act of evaluation. That is, although instances of Affect may exploit resources associated with emotion, the function of those instances may well be to perform an act of Judgement or Appreciation. Bringing together these two arguments, our final proposal is to take these parallels into account in a revision of the Attitude network.

Although, as Table 8 shows, Judgement and Appreciation can be distinguished by pattern differentials, there are many more instances where the same pattern can realise both Judgement and Appreciation, depending on the adjective chosen. There are even some cases in which the same adjective and pattern can realise either category, depending on the target of the appraisal. Table 10 gives some examples of these.

#### **TABLE 10 ABOUT HERE**

Examples such as those in Table 10 confirm that distinguishing between Judgement and Appreciation is not simply a matter of identifying and classifying the adjective used. Rather, both the adjective and the target must be taken into account. In a similar vein, Martin and White (2005: 59) have argued that “the source and target of evaluation are also criteria” for appraisal analysis, i.e. the source of Affect is conscious participants, the target of Judgement is human behaviour/character and the target of Appreciation is things, whether concrete, abstract or semiotic.

The upshot of the above discussion, then, is that appraisal comprises choices that involve aspects of both attitudinal lexis and attitudinal target, which is consistent with the conclusions of

Bednarek (2009). The implication is that attention should not only be paid to both aspects when practicing appraisal analysis, but more importantly, both aspects need to be accounted for in modelling Appraisal. The importance of both aspects, however, “has not been sufficiently considered in appraisal theory so far” (Bednarek 2009: 165). This of course does not mean that Appraisal has not taken into account both the value attributed to, and the target involved in, an evaluation. What it does mean is that, as Thompson (2014: 49) points out, the distinction between value choice and target choice has tended to be elided. We propose instead that the simultaneous choices in terms of both value and target be made more explicit. We shall return to this point below.

The second argument to be made in this section recapitulates the point that the function of Appraisal, whatever the resources used, is to evaluate a target, or in Thompson’s (2010: 402) words, “‘appraising’ must have a target”. This is particularly apparent when the adjective occurs with a complementation pattern. For example, whereas ‘I was happy’ would instantiate Affect and nothing else, if *happy* is complemented with a prepositional phrase (*I was not happy with the improvement; I wasn’t at all happy about the arrangements; I can’t sell unless I’m happy with the product*) the analysis is pushed towards Appreciation because a potential target is present. Seen in this light, the adjectives associated with Affect and those with Opinion in the same pattern might be interpreted as repositioning the target rather than performing different functions. This will be further discussed in the light of four examples taken from Table 2 and repeated here:

- (25) They are **ignorant as to** how the stock market operates.
- (26) She was **puzzled as to** what motivated him.
- (27) She’s **excellent at** getting people to do things.
- (28) He was really **mad at** me.

Examples 27 and 28, although they share a pattern, are quite different, in the sense that the target of the appraisal is in a different place in the clause. In 28 the target is the object of the preposition: *me*. In 27 it is arguably either the subject, *she*, or a combination of the subject and

the object of the preposition: ‘she...gets people to do things’. Examples 25 and 26 are more similar to each other. ‘They are ignorant’ evaluates *They* as lacking knowledge but by extension might indicate the perplexing nature of *how the stock market operates*. ‘She was puzzled’ indicates ‘her’ evaluation of *what motivated him*, but by extension might indicate ‘her’ lack of knowledge.

We are now in a position to bring together these two observations. On the one hand, what is evaluated is important to the classification of appraisal. On the other hand, in those cases where adjectives occur with a complementation pattern, the instances can be interpreted as both Affect and Judgement / Appreciation. In response to this, we propose a possible reformulation of the Attitude systems. The initial version of this network is shown in Figure 1. An alternative version that distinguishes Emotion from Opinion is shown in Figure 2. Our proposed version is shown in Figure 3. This suggests that appraisal instances represent a simultaneous choice between what is evaluated (i.e. the target which may either be human beings, including both their character and behaviour, or things) and how it is evaluated (through a statement of emotion – the target provokes a feeling in the evaluator – or through a statement of opinion about quality – the target possesses inherent qualities).

### **FIGURES 1 – 3 ABOUT HERE**

This reinterpretation has practical implications as well. The consideration of both attitudinal lexis and attitudinal target together is useful for accounting for borderline cases that Appraisal analysts often encounter (Martin & White 2005: 58–61). Simply put, these borderline cases are: 1) judging lexis can be used to appreciate and appreciating lexis can be used to judge (e.g. *a skilful person/innings; an important man/issue*), 2) there is an overlap between Affect and the Appreciation variable termed Reaction, and 3) some emotion terms (e.g. *cheerful, confident*) can be used to denote personality traits associated with emotion (Thompson 2014: 55), suggesting that some aspects of Affect are not distinct from Judgements of emotivity. Interpreting Appraisal as a simultaneous choice may help appraisal analysts to deal with these conundrums. For

example, we can analyse instances that comprise a combination of *human beings* and *opinion* as Judgement, and a combination of *human beings* and *emotion* as Affect. Differing from Affect and Judgement, Appreciation can be instantiated either by the combination of *attitudinal target: thing* with *attitudinal lexis: opinion* or by the combination of *attitudinal target: thing* with *attitudinal lexis: emotion*; this is because emotion can also be indicated “as a quality of the thing evaluated, as in ... *after the distressing events of 1887*” (AUTHOR 2003). The point, then, is that interpreting Appraisal as instantiated by choices made simultaneously in terms of both attitudinal target and attitudinal lexis facilitates the practice of appraisal analysis in real contexts.

## **7. Conclusion**

This paper has extended the scope of previous explorations into the relationship between language patterns and attitudinal meanings. It has presented a systematic and comprehensive investigation into the association between adjective patterns and types of Attitude. It has addressed the questions as to whether and how far the Appraisal classification of Attitude can be supported with pattern differentials and whether grammatical patterns can be used as a diagnostic to distinguish types of Attitude. In general, it has been shown that the basic distinction drawn between the resources of emotion and opinion can be supported with differentials between linguistic patterns, which is consistent with observations by Bednarek (2009). Further, the examination of all the adjective patterns identified in Francis *et al.* (1998) shows that Judgement and Appreciation do not share all adjective patterns, which suggests that the distinction made between the ethical evaluation of human character and/or behaviour and the aesthetic evaluation of processes and products can also be illustrated with pattern differentials and thus receives some empirical support. Moreover, while the current investigation generally aligns with Bednarek’s (2009) argument that it would not be easily possible to use pattern differentials to distinguish automatically types of attitudinal meanings, we find that there are some language patterns which only co-occur with one particular type of

attitudinal lexis, which suggests that adjective patterns have least some discriminatory potential. A limitation, however, is that very few such patterns are found and that most of them occur relatively infrequently.

The detailed scrutiny of adjective patterns in the light of the framework of Appraisal has in turn offered some new insights into Appraisal theory. To be specific, the pattern differentials between assessments of emotion and opinion and between Judgement and Appreciation support the Appraisal classification of attitudinal meanings into Affect, Judgement and Appreciation. Our findings also suggest that both aspects of attitudinal target and attitudinal lexis should be accounted for in theorising Appraisal, which leads to the argument that appraisal is in essence instantiated by choices made simultaneously in terms of both attitudinal target (i.e. a human target or a thing target) and attitudinal lexis (i.e. emotion lexis or opinion lexis). Further, it has been argued that interpreting Appraisal as simultaneous choice helps to deal with borderline cases that appraisal analysts often face.

It has to be noted that our analysis has exclusively focused on adjectival patterns. Other types of language patternings, notably, noun and verb patterns (see Francis *et al.* 1996, 1998), still await an analysis of their attitudinal meanings. Although it is true that evaluation is typified by adjectives, this does not mean that evaluation cannot be realised by noun/verb patterns (e.g. *success* in **N as**: *Wilson's success as a collector*; *succeed* in **V in**: *he succeeded in attracting research funds*). The importance of exploring the association between noun/verb patterns and attitudinal meanings cannot be overestimated (see also Felices-Lago & Cortés-de-los-Ríos 2014: 117). Language patterns have been shown to be highly useful for the investigation of evaluative language, as has been demonstrated in, for example, Hunston and Sinclair (2000), Bednarek (2009), AUTHOR (2011), AUTHOR (2015). Increased efforts in this area of research are both worthwhile and desirable, and with this study we hope to encourage further investigations into the association between language patternings and attitudinal meanings.

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## TABLES AND FIGURES

**Table 1.** Adjectives followed by clauses

Pattern	Attitude type	Example
ADJ <i>that</i>	Judgement	They were <i>lucky that</i> we scored when we did
	Appreciation	
	Affect	He was <i>annoyed that</i> no meal was available
ADJ <i>wh</i>	Judgement	
	Appreciation	
	Affect	They are <i>afraid what</i> their neighbours and children will think
ADJ <i>to-inf.</i>	Judgement	We would be <i>foolish to</i> ignore them
	Appreciation	Horses are <i>pretty to</i> look at
	Affect	I'm <i>pleased to</i> say that we're running on schedule
ADJ <i>-ing</i>	Judgement	I was <i>daft going</i> into management
	Appreciation	
	Affect	I felt <i>guilty having</i> eight hours' sleep

**Table 2.** Adjectives followed by prepositional phrases

Pattern	Attitude type	Example
ADJ <i>about n</i>	Judgement	She is highly <i>intelligent about</i> the industry she has made her own
	Appreciation	
	Affect	he was not <i>happy about</i> people having to move
ADJ <i>against n</i>	Judgement	He appears <i>powerless against</i> the corrupt politicians
	Appreciation	Cream is also <i>helpful against</i> a dry flaky skin
	Affect	
ADJ <i>as</i>	Judgement	He's proved absolutely <i>ideal as</i> the captain
	Appreciation	These are quite <i>popular as</i> indoor plants
	Affect	
ADJ <i>as to wh</i>	Judgement	They are <i>ignorant as to</i> how the stock market operates
	Appreciation	
	Affect	She was <i>puzzled as to</i> what motivated him
ADJ <i>at</i>	Judgement	She's <i>excellent at</i> getting people to do things
	Appreciation	
	Affect	He was really <i>mad at</i> me
ADJ <i>between pl-n</i>	Judgement	
	Appreciation	... but in mainstream broadcasting boundaries are more <i>rigid between</i> technical and conceptual areas ...
	Affect	Michael is <i>confused between</i> masculine and feminine roles ...
ADJ <i>by</i>	Judgement	
	Appreciation	Negotiations have been <i>complicated by</i> the refusal of ...
	Affect	Evan was <i>bemused by</i> his fans' reactions
ADJ <i>for</i>	Judgement	He is <i>renowned for</i> having a hot temper
	Appreciation	A tall storage is <i>perfect for</i> hiding ironing boards
	Affect	I'm <i>happy for</i> him
ADJ <i>from</i>	Judgement	Upper-class Christians were <i>indistinguishable from</i> their pagan fellows in their life-style
	Appreciation	The central sink unit is easily <i>accessible from</i> all sides of the room
	Affect	She felt <i>tired from</i> the unexpected strain of this afternoon

<b>ADJ in</b>	Judgement	Mr Gates has been hugely <i>successful in</i> creating a world-beating business
	Appreciation	... celery seed extracts are <i>helpful in</i> the treatment of arthritis
	Affect	He was utterly <i>absorbed in</i> his private game
<b>ADJ of</b>	Judgement	She was <i>capable of</i> winning the gold medal in tennis
	Appreciation	Their sentences are <i>devoid of</i> meaning
	Affect	We are <i>proud of</i> our achievements
<b>ADJ on</b>	Judgement	Malcolm may have been <i>weak on</i> theory
	Appreciation	Tea-tree oil is <i>gentle on</i> the skin
	Affect	They were both <i>keen on</i> the idea of education
<b>ADJ over</b>	Judgement	Max was recently <i>victorious over</i> ex-Soviet chess master Yuri Shulman
	Appreciation	In all cultures some jobs are <i>privileged over</i> others Labour is vulnerable over tax
	Affect	Mr Moon was <i>furious over</i> his arrest
<b>ADJ to n</b>	Judgement	He was completely <i>horrible to</i> me
	Appreciation	This matter is financially <i>important to</i> the future of the racing industry
	Affect	Shakespeare was not <i>averse to</i> borrowing from ancient and, even, contemporary authors
<b>ADJ towards</b>	Judgement	He was ... <i>aggressive towards</i> other boys
	Appreciation	
	Affect	I've always felt <i>affectionate towards</i> Karen
<b>ADJ with</b>	Judgement	He was not very <i>expert with</i> a mop
	Appreciation	The air was <i>fragrant with</i> the smell of orange blossoms
	Affect	She was <i>happy with</i> her achievements

**Table 3.** Adjective patterns with an introductory *it*

Pattern	Attitude type	Example
<b><i>it</i> v-link ADJ <i>that</i></b>	Judgement	<i>It was silly that</i> both of them should do it
	Appreciation	<i>Isn't it marvellous that</i> these buildings have survived
	Affect	<i>it is frustrating</i> so many films centre their story around sex, or rely on it as a means to tell the story
<b><i>it</i> v-link ADJ <i>for</i> n <i>that</i></b>	Judgement	<i>It was fortunate for George that</i> the cinema manager could watch that George had been in the cinema all evening
	Appreciation	<i>It is vital for peace that</i> the Soviet Union act as another super-power
	Affect	
<b><i>it</i> v-link ADJ <i>of</i> n <i>that</i></b>	Judgement	<i>It was typical of Livy that</i> she had telephoned
	Appreciation	
	Affect	
<b><i>it</i> v-link ADJ <i>to</i> n <i>that</i></b>	Judgement	<i>It seemed only fair to me that</i> she should have the money
	Appreciation	<i>It is important to us that</i> most of our friends are actors
	Affect	<i>it was very disappointing to me that</i> Lisa felt this way
<b><i>it</i> v n ADJ <i>that</i></b>	Judgement	
	Appreciation	
	Affect	<i>It makes me sad that</i> they don't get the chance
<b><i>it</i> v n as ADJ <i>that</i></b>	Judgement	<i>It never struck me as odd that</i> a man should express emotion
	Appreciation	
	Affect	
<b><i>it</i> v-link ADJ <i>wh</i></b>	Judgement	<i>it's understandable why</i> they hate the sight of him
	Appreciation	<i>it's immaterial what</i> he thinks
	Affect	<i>it's doubtful whether</i> I'd recognise him again
<b><i>it</i> v-link ADJ <i>what/how</i></b>	Judgement	<i>I think it's fantastic what they're doing</i>

	Appreciation	<i>It's funny how</i> things work out
	Affect	<i>it's disgusting what</i> they've done
<i>it v-link ADJ when/if</i>	Judgement	<i>Would it look rude if</i> she took out a book?
	Appreciation	I think <i>it would be disastrous if</i> the divisional championship was scrapped
	Affect	<i>It's frustrating when</i> people try to do things and are held up with red tape
<i>it v-link ADJ to-inf.</i>	Judgement	I thought <i>it would be selfish to</i> marry if I were going to be killed
	Appreciation	<i>It is essential to pay</i> in advance
	Affect	<i>It was annoying to</i> have people clicking their fingers at you to get your attention
<i>it v-link ADJ for n to-inf.</i>	Judgement	I think <i>it is wrong for anybody to say</i> "you will teach in this way"
	Appreciation	<i>It is essential for there to be</i> established codes of practice
	Affect	<i>It was disappointing for Toby not to</i> see a tractor
<i>it v-link ADJ of n to-inf.</i>	Judgement	<i>It was lovely of them to</i> help me
	Appreciation	
	Affect	
<i>it v n ADJ to-inf.</i>	Judgement	
	Appreciation	
	Affect	<i>It makes me sad to see</i> all the good work we have done devalued in this way
<i>it v-link ADJ ing</i>	Judgement	<i>It was ridiculous putting</i> him behind bars
	Appreciation	<i>It is worthwhile looking out</i> for special deals and discounts
	Affect	<i>It is terrifying being</i> a soldier
<i>v it ADJ that</i>	Judgement	He <i>thought it ridiculous that</i> anyone should care about animals so much
	Appreciation	We <i>thought it important that</i> Phil continue to write
	Affect	I <i>find it amazing that</i> he can be so cruel
<i>v it as ADJ that</i>	Judgement	Politicians <i>take it as axiomatic that</i> nobody votes for higher taxes
	Appreciation	I <i>regarded it as essential that</i> the talks I was due to have with the President should be a success
	Affect	
<i>v it ADJ to-inf.</i>	Judgement	Fruitarians <i>believe it wrong to</i> eat the living leaves and roots of vegetables
	Appreciation	Those ... <i>find it beneficial to</i> pursue a longer initial course of study
	Affect	They <i>find it annoying to</i> stand in a queue all day
<i>v it ADJ for n to-inf.</i>	Judgement	Mike <i>thought it silly for me to</i> wait in the car
	Appreciation	Over 90 per cent of parents <i>think it important for children to</i> play outside
	Affect	
<i>v it as ADJ to-inf.</i>	Judgement	We <i>regard it as immoral to judge</i> people on the basis of how they were born
	Appreciation	They <i>would regard it as risky to</i> test the currency
	Affect	
<i>it v-link ADJ about n</i>	Judgement	<i>It's something educational about</i> government
	Appreciation	<i>It's too bad about</i> the reviews
	Affect	<i>It's so sad about</i> her husband

**Table 4.** *there* patterns

Pattern	Attitude type	Example
<i>there</i> v-link sth/ath/nth ADJ about n / ing	Judgement	<i>There was something special about</i> Nick
	Appreciation	<i>There's nothing good about</i> being poor
	Affect	<i>There's something immensely satisfying about</i> presiding over a busy evening in your own bar
<i>there</i> v-link sth/ath/nth ADJ in n / ing	Judgement	<i>There is nothing wrong</i> in setting high standards for ourselves
	Appreciation	<i>There's something original</i> in these pictures
	Affect	<i>There is something really satisfying</i> in being able to do it properly
<i>there</i> v-link sth/ath/nth ADJ with n / ing	Judgement	<i>There is nothing wrong with borrowing</i> to buy a house as long as the amount borrowed is affordable and the house is a good buy
	Appreciation	<i>There is nothing amiss with a little gentle exuberance</i> to celebrate a moment of sporting glory
	Affect	

**Table 5.** *what* patterns

Pattern	Attitude type	Example
<i>what</i> v-link ADJ v-link <i>that</i>	Judgement	<i>what is strange was that</i> he had never tried it before
	Appreciation	<i>what is important is that</i> the weekly staff meeting is a democratic forum for discussion
	Affect	<i>What is surprising is that</i> few scientists stop to reflect on what they are doing
<i>what</i> v-link ADJ v-link <i>wh</i>	Judgement	
	Appreciation	<i>What's important is whether</i> you make or lose money
	Affect	<i>what is puzzling is why</i> dinosaurs lasted as long as they did and how ...
<i>what</i> v-link ADJ v-link - <i>ing</i>	Judgement	
	Appreciation	<i>What is important is determining</i> why they were here
	Affect	
<i>what</i> v-link ADJ to-inf. v-link <i>that/wh</i>	Judgement	
	Appreciation	<i>What's important to remember is that</i> this information was never used alone
	Affect	
<i>what</i> v-link ADJ to n v- link <i>that/wh</i>	Judgement	
	Appreciation	<i>What is important to us is that</i> all the areas will now use the same software ...
	Affect	<i>What is interesting to the railway enthusiast is that</i> the connection ... is still clearly visible.
<i>what</i> v-link ADJ about n v-link n/ <i>that/wh</i>	Judgement	<i>What was impressive about her was that</i> she was unwilling to talk about her talent unless pressed
	Appreciation	<i>What's unique about Head Start is that</i> in addition to early child education for pre-schoolers, we provide health care for the children, nutritional services, social services to the family
	Affect	<i>What is most surprising about the parsonage itself</i> is its size

<i>what</i> v-link ADJ in n v-link <i>that/wh</i>	Judgement	
	Appreciation	<i>What was striking in these photographs</i> were the changing expressions on the faces of the high party officials
	Affect	
<i>what</i> v-link ADJ with n v-link <i>that/wh</i>	Judgement	<i>What is wrong with the Greens is that</i> they do not acknowledge ...
	Appreciation	<i>What is wrong with this book is that</i> it is just one side of the story
	Affect	

**Table 6.** Proportion of adjective types in each category

Pattern	Affect		Judgement		Appreciation	
	No. of types	%	No. of types	%	No. of types	%
<b>ADJ at</b>	34	<b>75.56</b>	11	24.44	0	0
<b>ADJ about</b>	39	<b>54.93</b>	32	45.07	0	0
<b>ADJ by</b>	52	<b>94.55</b>	0	0	3	5.45
<b>ADJ for</b>	20	20.62	20	20.62	57	<b>58.76</b>
<b>ADJ in</b>	15	13.89	64	<b>59.26</b>	30	26.85
<b>ADJ of</b>	30	<b>41.67</b>	27	37.50	15	20.83
<b>ADJ to n</b>	9	6.67	43	31.85	83	<b>61.48</b>
<b>ADJ towards</b>	1	6.67	14	<b>93.33</b>	0	0
<b>ADJ with</b>	37	<b>50.00</b>	24	32.43	13	17.57
<b>ADJ to-inf.</b>	62	<b>63.92</b>	23	23.71	12	12.37
<b>ADJ that</b>	46	<b>93.88</b>	3	6.12	0	0

**Table 7.** Patterns that only co-occur with emotion or opinion lexis

Pattern \ Category	Emotion	Opinion
<b>ADJ wh</b>	√	
<b>ADJ against n</b>		√
<b>ADJ as</b>		√
<b>it v-link ADJ for n that</b>		√
<b>it v-link ADJ of n that</b>		√
<b>it v n ADJ that</b>	√	
<b>it v n as ADJ that</b>		√
<b>it v-link ADJ of n to-inf.</b>		√
<b>it v n ADJ to-inf.</b>	√	



<i>v it as ADJ that</i>		√
<i>v it ADJ for n to-inf.</i>		√
<i>v it as ADJ to-inf.</i>		√
<i>there v-link sth/ath/nth ADJ with n / ing</i>		√
<i>what v-link ADJ v-link -ing</i>		√
<i>what v-link ADJ to-inf. v-link that/wh</i>		√
<i>what v-link ADJ in n v-link that/wh</i>		√
<i>what v-link ADJ with n v-link that/wh</i>		√

**Table 8.** Patterns that only co-occur with one type of opinion lexis

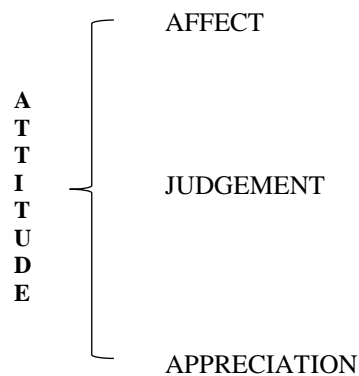
<b>Pattern \ Category</b>	<b>Judgement</b>	<b>Appreciation</b>
<b>ADJ that</b>	√	
<b>ADJ wh</b>		
<b>ADJ to-inf.</b>	√	√
<b>ADJ -ing</b>	√	
<b>ADJ about</b>	√	
<b>ADJ as to wh</b>	√	
<b>ADJ at</b>	√	
<b>ADJ between pl-n</b>		√
<b>ADJ by</b>		√
<b>ADJ towards</b>	√	
<i>it v-link ADJ of n that</i>	√	
<i>it v n as ADJ that</i>	√	
<i>it v-link ADJ of n to-inf.</i>	√	
<i>what v-link ADJ v-link wh</i>		√
<i>what v-link ADJ v-link -ing</i>		√
<i>what v-link ADJ to-inf. v-link that/wh</i>		√
<i>what v-link ADJ to n v-link that/wh</i>		√
<i>what v-link ADJ in n v-link that/wh</i>		√

**Table 9.** Patterns that co-occur with one type of attitudinal lexis only

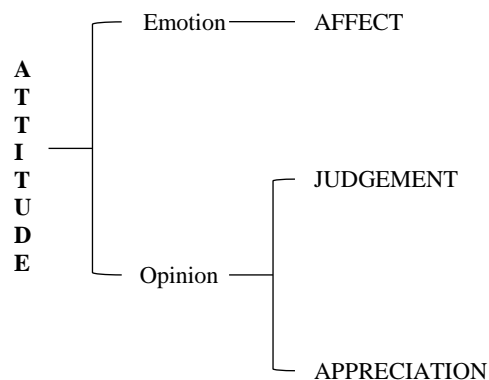
<b>Pattern \ Category</b>	<b>Judgement</b>	<b>Appreciation</b>	<b>Affect</b>
<b>ADJ wh</b>			√
<i>it v-link ADJ of n that</i>	√		
<i>it v n ADJ that</i>			√
<i>it v n as ADJ that</i>	√		
<i>it v-link ADJ of n to-inf.</i>	√		
<i>it v n ADJ to-inf.</i>			√
<i>what v-link ADJ v-link -ing</i>		√	
<i>what v-link ADJ to-inf. v-link that/wh</i>		√	
<i>what v-link ADJ in n v-link that/wh</i>		√	

**Table 10.** Judgement and Appreciation dependent on target

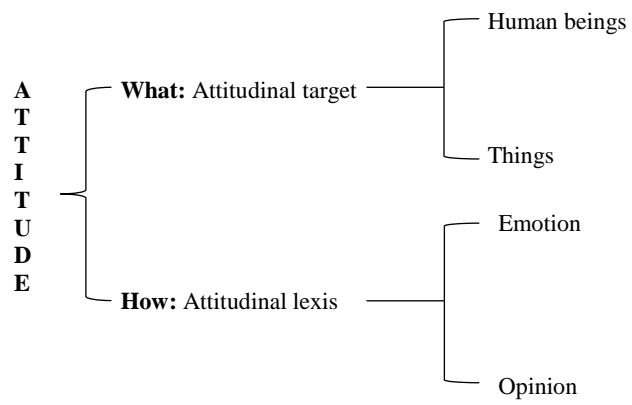
Pattern	Adjective	Attitude type	Example
ADJ <i>as</i> n	<i>ideal</i>	Judgement	Johnson remains nearly <i>ideal as</i> the jealous, mercurial prima donna
ADJ <i>as</i> n	<i>ideal</i>	Appreciation	Seasonality makes tourism <i>ideal as</i> a complementary activity...
ADJ <i>at</i> n	<i>excellent</i>	Judgement	She was <i>excellent at</i> getting to know people
ADJ <i>at</i> n	<i>excellent</i>	Appreciation	These [chemicals] are <i>excellent at</i> bruise management...
ADJ <i>for</i> n	<i>famous</i>	Judgement	She was <i>famous for</i> her outrageous, witty remarks
ADJ <i>for</i> n	<i>famous</i>	Appreciation	The ... restaurant, <i>famous for</i> its oysters...
ADJ <i>to</i> n	<i>important</i>	Judgement	She was <i>important to</i> him
ADJ <i>to</i> n	<i>important</i>	Appreciation	These ionospheric currents are also <i>important to</i> the acceleration mechanism of charged particles
<i>it</i> v-link ADJ <i>that</i>	<i>marvellous</i>	Judgement	<i>It's marvellous that</i> you keep doing things.
<i>it</i> v-link ADJ <i>that</i>	<i>marvellous</i>	Appreciation	<i>It was marvellous that</i> it was all over



**Figure 1.** ATTITUDE as a parallel system



**Figure 2.** An alternative interpretation of ATTITUDE



**Figure 3.** Appraisal as simultaneous choice